User's Manual for 88M Digital Manometer

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Overview

Th 88M Digital Manometer measures Gauge-Differential Pressure from -55.4inH_20 to +55.4 inH_20 (± 2 psi). It features 11 selectable units of measure: inH_20, psi, bar, mbar, kPa, inHg, mmHg, ozin^2, ftH_20, cmH_20, cmH_20, kgcm^2. Additional features include Data Hold and Auto Power Off Disabled. Careful use of this meter will provide years of reliable service. When the 88M Manometer is not in use store it in its pouch.

Specifications:

Display	Dual LCD
Accuracy	±0.3%FSO (25 ºC)
Repeatability	±0.2% (Max.+/ -0.5% FSO)
Linearity/Hysteresis	±0.29% FSO
Pressure Range	±2 psi
Maximum Pressure	10psi
Response Time	0.5 Seconds typical
Low Battery Indicator	Yes
Over range Indicator	Err.1
Under range Indicator	Err.2
Operating Conditions	0 to 50 ºC
Storage Conditions	-10 to 60 ºC
Power Supply	1 each 9V Battery or external 9Vdc Power Supply

Measurement Scales:

Function	Range	Resolution	**Function**	Range	Resolution
in-h^20	55.40	0.01	oz-in^2	32.00	0.01
psi	2.000	0.001	ft-h^20	4.612	0.001
mbar	137.8	0.1	cm-h20	140.6	0.1
kpa	13.79	0.01	kgcm^2	0.140	0.001
in-hg	4.072	0.001	bar	0.137	0.001
mm-hg	103.4	0.1			

Function Buttons:
The meter has four buttons. See **Figure 1**.

1. UNITS 2. DIF 3.REC 4.ON/OFF

Display Description:
The meter will display the following. See **Figure 2.**

1. Hold Function
2. Differential Mode
3. Primary Data Screen
4. MAX/MIN/AVG
5. Low Battery Indicator
6. Pressure Unit indicator
7. Relative Time Clock

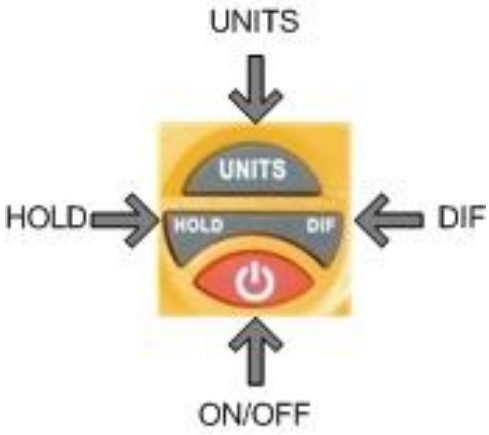

Figure 1

Operation:

1. Power
Press the **ON/OFF** button to turn the meter power on or off. The meter will perform a short self-test when turned on. The meter defaults to the UNITS setting used during the last operation.

2. Zero Adjust and Offset
Before using and without hoses or fittings attached to the meter, press the **HOLD** button for more than 2 seconds to zero the meter. The meter will reset and display "**0000**" from right to left and **0.000** will be displayed.
If it is desired to offset the meter and display, press the **DIF** button while taking a measurement Subsequent reading will be the difference between the current measurement and the measurement that was on the display when the **DIF** button was pressed.

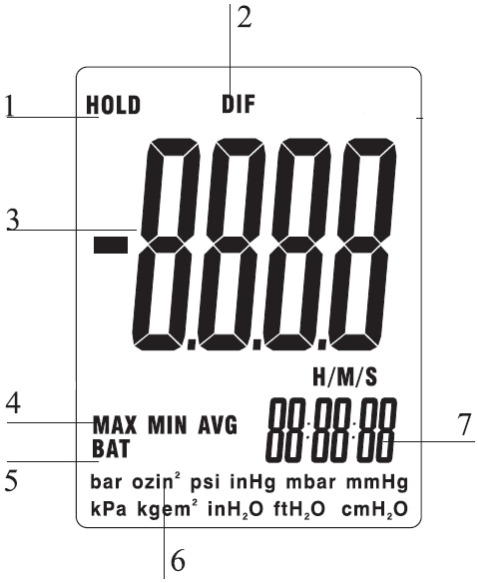

Figure 2

3. Data Hold
Press the **HOLD** button momentarily to freeze the displayed reading. The '**HOLD**' icon will appear on the upper left-hand side of the display. If the pressure value is over the range, error codes will show on the screen. Press the **HOLD** button again to return to normal operation.

4. Backlight Display
Press the **Backlight** button to turn on the backlight. It will remain on for 40 seconds.

5. Automatic Power Off
The meter will automatically shut off after 20 minutes to conserve battery life. To disable Auto Power Off, hold down the HOLD button and turn on the meter. An "**n**" will appear in the display indicating that Auto Power Off mode is disabled. The meter will return to normal operation when it is turned off.

6. Units of Measure
Press the Unit button momentarily and the meter will cycle through the 11 available units of measure as indicated by the cursor on the bottom of the display.

7. Error Codes
An error message will appear on the display if the meter fails an internal diagnostic test. With a failure the meter will freeze all the buttons.

1. Err.1: Pressure value is over the range.
2. Err.2: Pressure value is below the range.
3. Err.3: DIF function, the differential pressure value is over range.
4. Err4: DIF function, the differential pressure value is below range.

Battery Replacement
When the battery power does not provide enough power for correct measurements, "**BAT**" will appear on the LCD display. Replace the 9V battery by removing the back cover.